

REMARKS

Responsive to the preliminary lack of unity determination made in the outstanding Official Action, Applicants provisionally elect group I (claims 21-33), with traverse.

Responsive to the election of species requirement, Applicants provisionally elect metalloenzymes as recited in claim 25. However, if metalloenzymes is too generic of a term, for search purposes applicants would further elect laccase and derivatives thereof (obtained by site directed mutagenesis and directed evolution). Claims 21-33 are readable on the elected species.

The reasons for traverse follow:

First, for filing a patent on an expression system, it is absolutely necessary to have a receiving strain (for the genetic transformation here: the BRFM44 strain that does not have a laccase activity) and an expression vector that brings an enzymatic production of interest (the proteins of interest). These two elements are linked and are necessary to obtain the recombinant protein of interest.

However, these elements are not at all included in the cited prior art, LOMASCOLO et al, 2003 (LOMASCOLO). First, the strain (ss3) used by LOMASCOLO is not genetically modified by the addition of a gene of interest. The ss3 strain already contains a laccase gene that produces the laccase in large quantity, without an inducer. The aim of this study is to point out that the

addition, of an inducer (e.g. ethanol) promotes the endogenous laccase gene and increases the enzymatic laccase production to 1 g/L. The work of LOMASCOLO only leads to the obtaining of a native protein.

On the contrary, the present invention aims to produce recombinant proteins.

Furthermore, the work of LOMASCOLO is based on a set of 1 to 3 endogenous genes of laccase, while the present invention is based on ten or so copies of an exogenous gene of laccase integrated into the genome of the receiving strain.

Thus the method of claim 21 clearly indicates that the aim of the present invention is to produce a specific recombinant protein and not a native protein.

The two strains are also different because the strain mentioned in LOMASCOLO (ss3) naturally produces a laccase protein, which is not the same as the BRFM44 strain used by the present invention. The BRFM44 strain does not produce naturally laccase, but serves as a receiving host which is transformed to produce recombinant proteins.

Therefore, in view of above remarks, withdrawal of the restriction requirement and a favorable action on all the claims are respectfully requested.

Should there be any matters that need to be resolved in the present application, the Examiner is respectfully requested to contact the undersigned at the telephone number listed below.

The Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to our credit card which is being paid online simultaneously herewith for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17.

Respectfully submitted,

YOUNG & THOMPSON

/Robert A. Madsen/

Robert A. Madsen, Reg. No. 58,543
209 Madison Street, Suite 500
Alexandria, VA 22314
Telephone (703) 521-2297
Telefax (703) 685-0573
(703) 979-4709

RAM/lad